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PATENT APPLN. NO. 10/521,439
RESPONSE UNDER 37 C.F.R. §1.111

AUG 09 2007

PATENT
NON-FINAL

IN THE CLAIMS:

1. (currently amended) A peritoneal dialyzer comprising: a catheter capable of injecting and discharging peritoneal dialysate in an abdominal cavity of a patient; a peritoneal dialysate circuit external of the patient connected to the catheter; and a dialyzer provided in the peritoneal dialysate circuit, the said dialyzer comprising a hemodialysate circuit connected so that peritoneal dialysate passing through the inside ~~can come into contact with contacts~~ hemodialysate via a hollow fiber membrane,

characterized in that means capable of measuring an osmotic agent concentration in peritoneal dialysate is provided in the peritoneal dialysate circuit on the side of the end at which the catheter is connected with respect to the dialyzer, and a mechanism for dehydrating the peritoneal dialysate according to the osmotic agent concentration measured by said means is provided in the hemodialysate circuit, and in that the peritoneal dialysate in the peritoneal dialysate circuit contacts the hemodialysate in the hemodialysate circuit via the membrane of said dialyzer and water in the peritoneal dialysate is removed to the hemodialysate via said dialyzer by said dehydrating mechanism.

2. (original) A peritoneal dialyzer according to Claim 1,

characterized in that said means capable of measuring said osmotic agent concentration is at least one type of means selected from the group consisting of an ultrasonic wave measuring apparatus, a refractive index measuring instrument, a light absorption instrument, and a conductive rate measuring instrument.

3. (canceled)

4. (previously presented) A peritoneal dialyzer according to Claim 1, characterized in that the mechanism for performing dehydration of peritoneal dialysate performs dehydration by a pump provided in the hemodialysate circuit.

5. (previously presented) A peritoneal dialyzer according to Claim 1, characterized in that osmotic agent cannot pass through a hollow fiber membrane in the dialyzer.

6. (previously presented) A peritoneal dialyzer according to Claim 1, characterized in that said osmotic agent is at least one type of compound selected from the group consisting of albumin, glucose polymer and dextran.

7. (currently amended) A method of peritoneal dialysis using a peritoneal dialyzer comprising a catheter capable of injecting and discharging peritoneal dialysate into/from an abdominal cavity of a patient, a peritoneal dialysate circuit external of the patient connected to the catheter, and a dialyzer provided in the peritoneal dialysate circuit, the said dialyzer including a hemodialysate circuit connected so that peritoneal dialysate passing through the inside can come into contact with hemodialysate via a hollow fiber membrane, and which includes

(a) taking peritoneal dialysate out from a patient and measuring an osmotic agent concentration (c1) in the peritoneal dialysate;

(b) calculating an amount of dehydration (uf1) of the peritoneal dialysate required for adjusting the osmotic agent concentration (c1) in the peritoneal dialysate to a predetermined osmotic agent concentration (c2),

(c) removing water corresponding to the calculated amount of dehydration (uf1) [[of]] in the peritoneal dialysate via the said dialyzer by a dehydrating mechanism in which the peritoneal dialysate in the peritoneal dialysate circuit contacts the hemodialysate in the hemodialysate circuit via the membrane of said dialyzer and water in the peritoneal dialysate is removed to the

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hemodialysate via said dialyzer; and

(d) injecting the peritoneal dialysate into the patient again.

8. (original) A method of peritoneal dialysis according to Claim 7, characterized in that measurement of the osmotic agent concentration in said peritoneal dialysate is performed by at least one type of means selected from the group consisting of an ultrasonic wave measuring apparatus, a refractive index measuring instrument, a light absorption instrument, and a conductive rate measuring instrument, provided in the peritoneal dialysate circuit on the side of the end at which the catheter is connected with respect to the dialyzer.

9. (previously presented) A method of peritoneal dialysis according to Claim 7, characterized in that dehydration of said peritoncal dialysate is performed by a mechanism for dehydrating by a pump provided on the hemodialysate circuit.

10. (previously presented) A peritoneal dialyzer according to according to Claim 7, characterized in that said osmotic agent cannot pass through the hollow fiber membranc in the dialyzer.

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11. (previously presented) A peritoneal dialyzer according to
Claim 7, characterized in that said osmotic agent is at least one
type of compound selected from the group consisting of albumin,
glucose polymer and dextran.